

Fig. 1(a) Prior Art

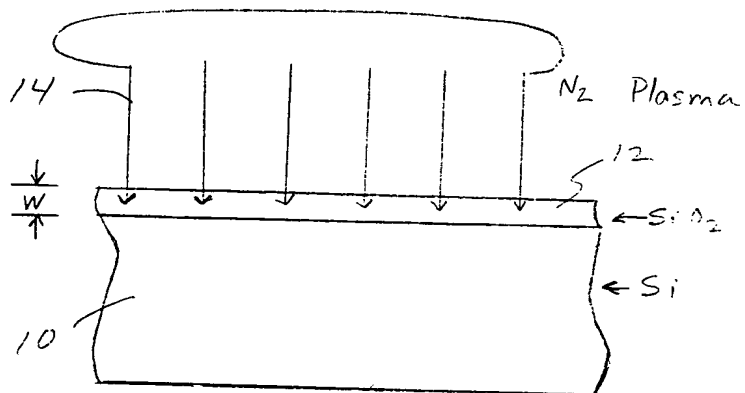


Fig. 1(b) Prior Art

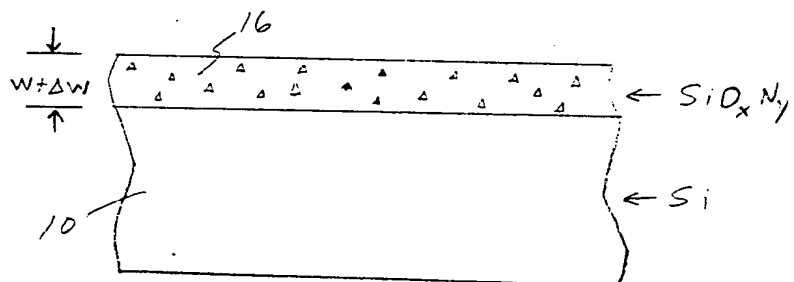


Fig. 1(c) Prior Art

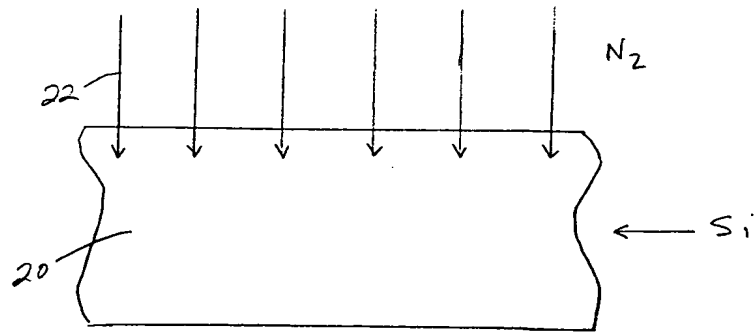


Fig. 2(a)

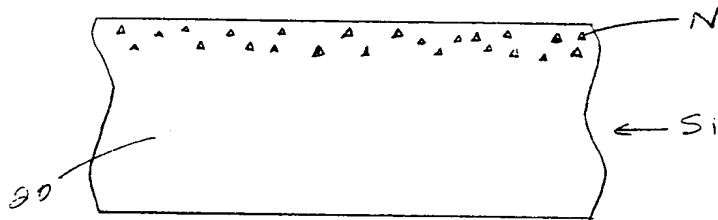


Fig. 2(b)

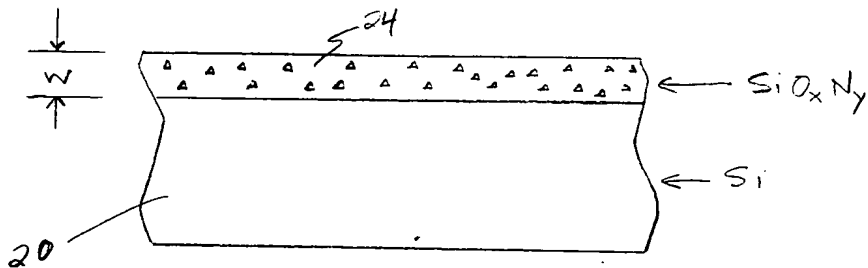


Fig. 2(c)

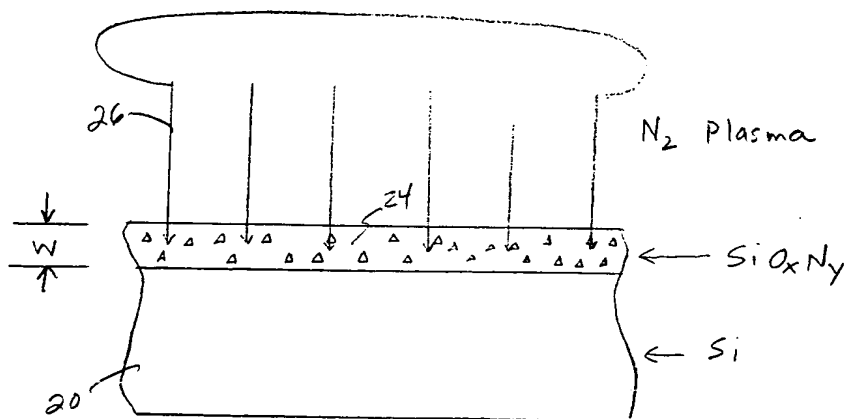


Fig. 2 (d)

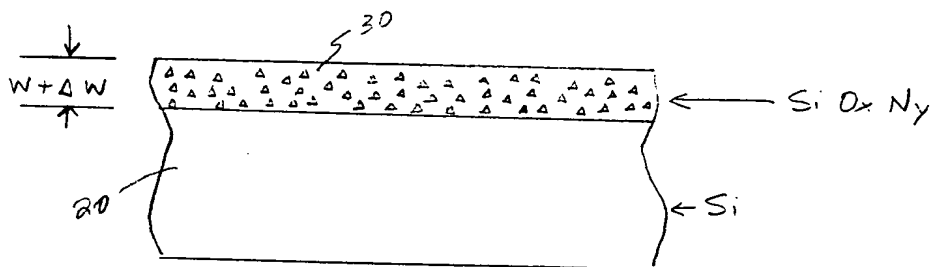


Fig. 2 (e)

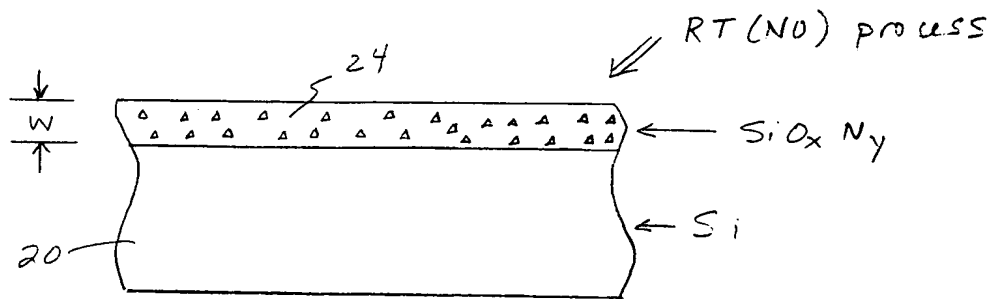


Fig. 3(a)

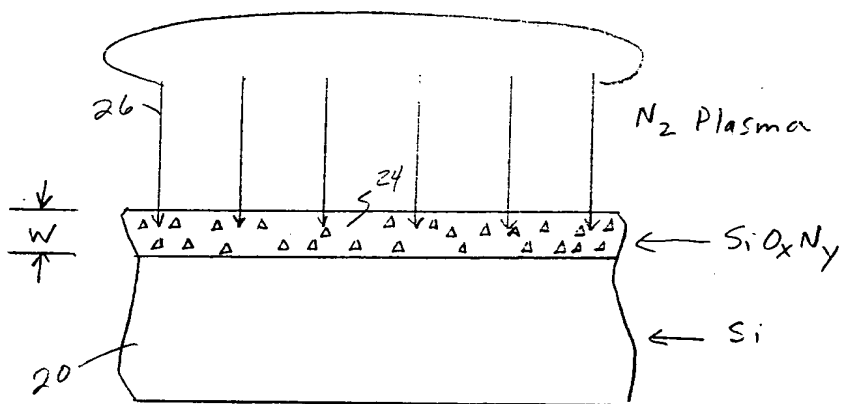


Fig. 3(b)

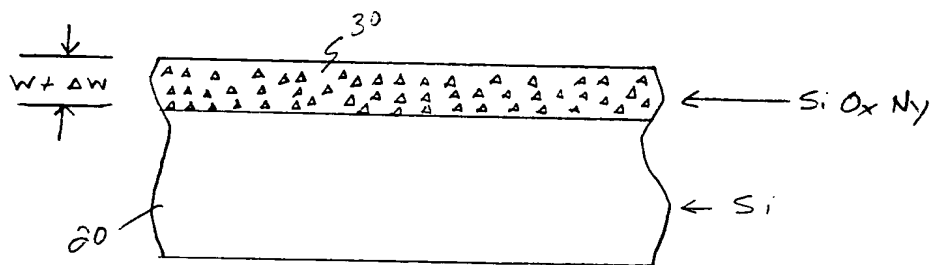
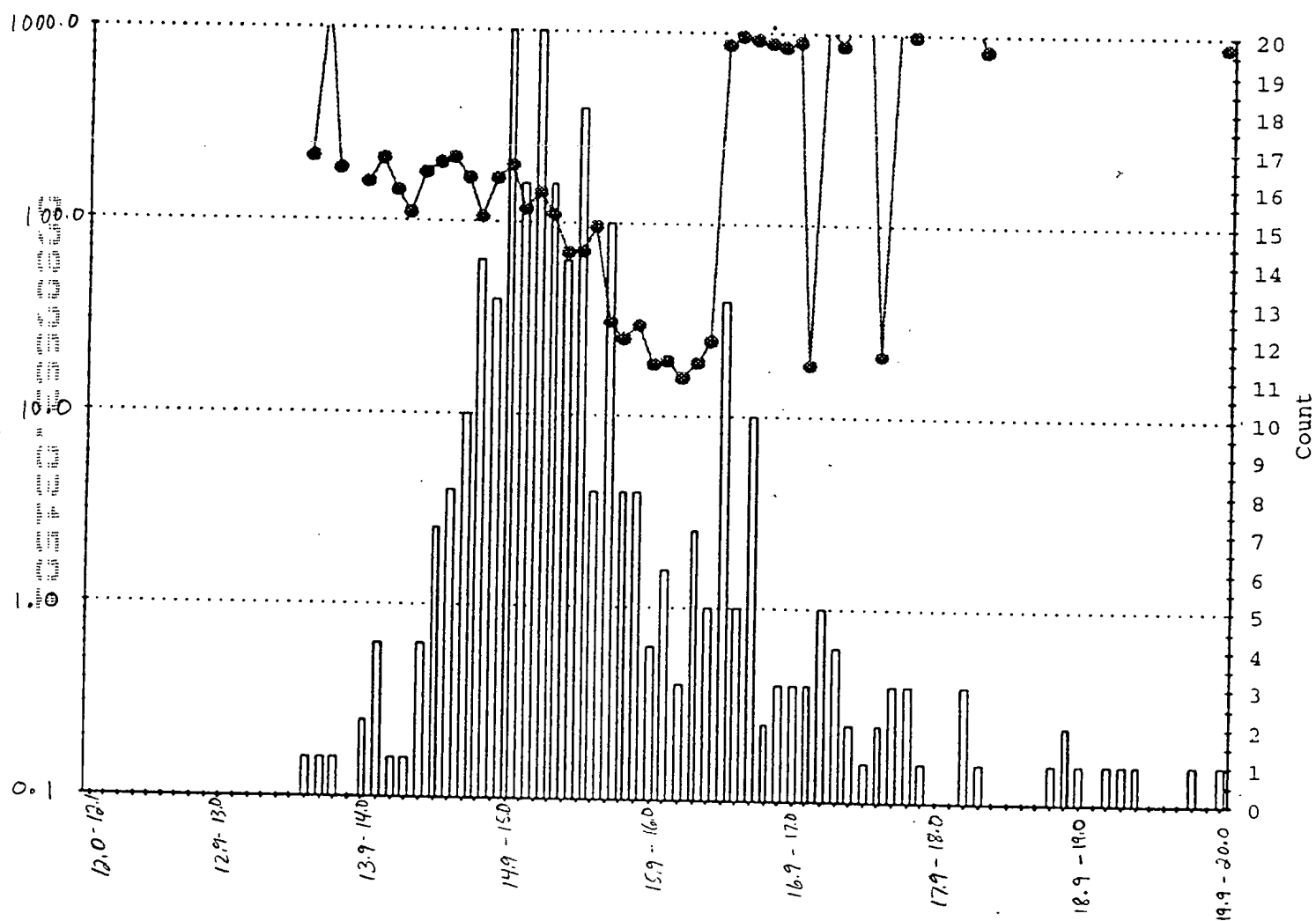


Fig. 3(c)

SiO₂ only



Gate Thickness (Å)

Fig. 4

SiO₂ + RPN
(Prior Art)

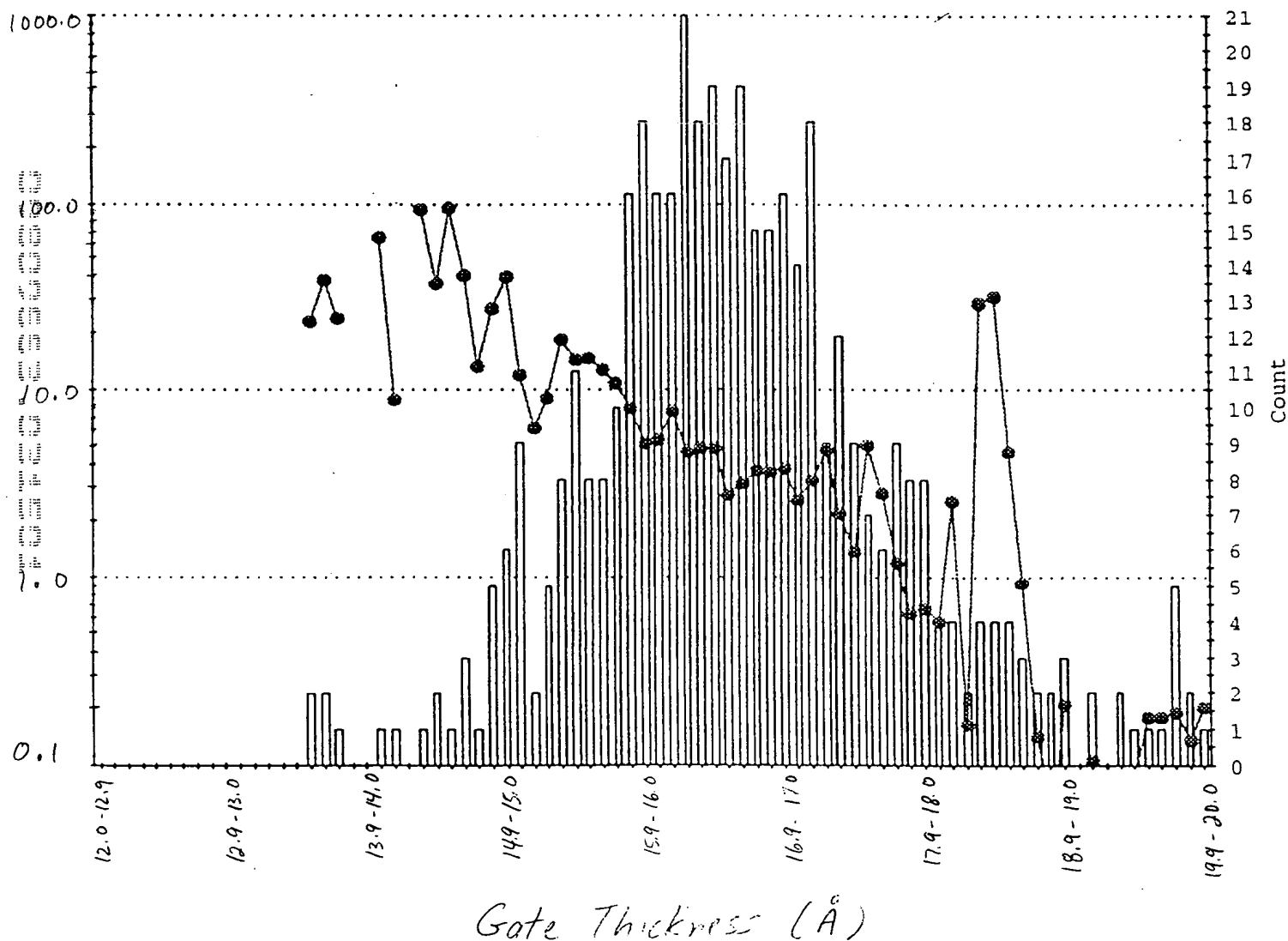


Fig. 5

$\text{SiO}_x\text{N}_y + \text{RPN}$

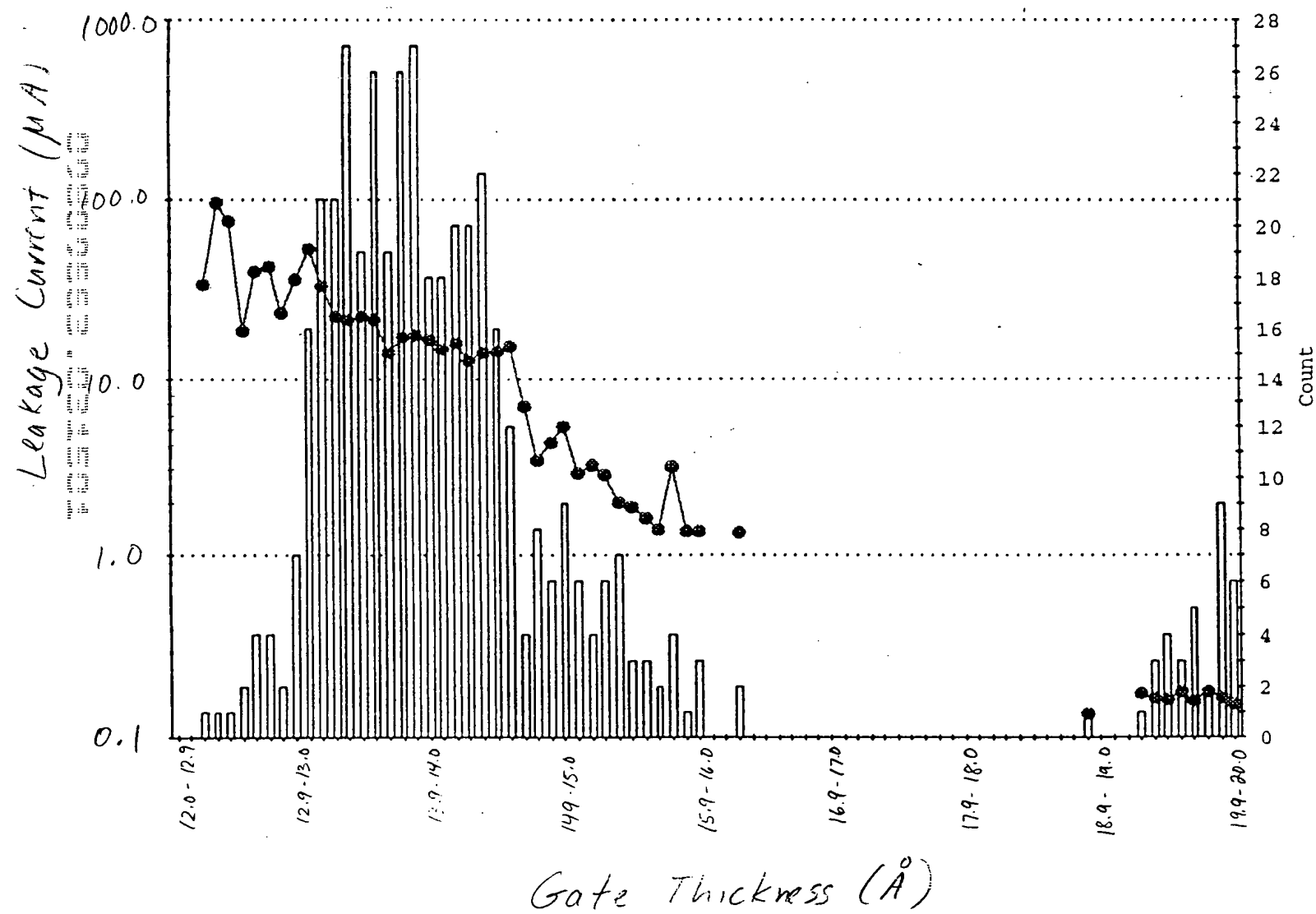


Fig. 6

Uniformity of Gate Film

| | <u>Mean Thickness (nm)</u> | <u>σ</u> |
|----------------------------------|----------------------------|----------------------------|
| RPN of SiO_2 (Dry) | 1.74 | 0.287 |
| RPN of SiO_2 (Wet) | 1.68 | 0.115 |
| RTNO | 1.70 | 0.0293 |
| RTNO + RPN @ 550°C | 1.74 | 0.0246 |
| RTNO + RPN @ 750°C | 1.73 | 0.0296 |

Fig. 7

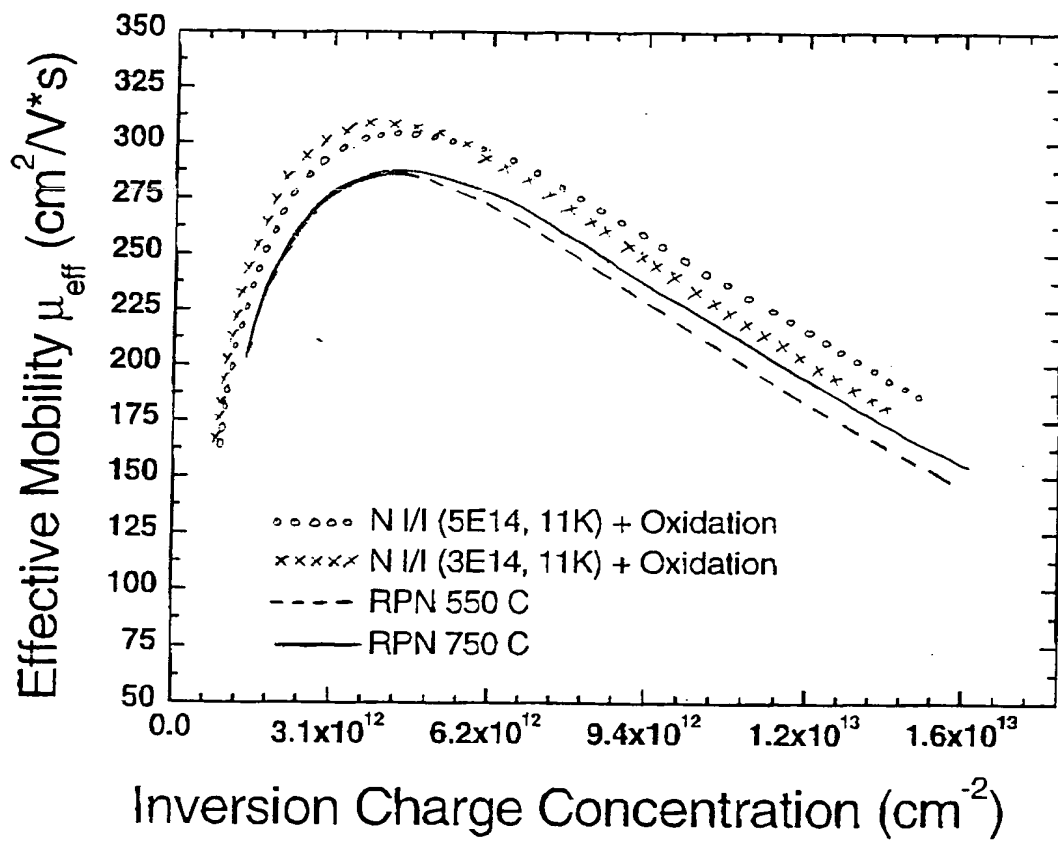


Figure 8